

IN THE CLAIMS:

Please delete claims 1-19, and add new claims 20-38 as follows.

Claims 1-19. (Cancelled)

20. (New) A method for adaptive setting or reservation of channelization codes and/or power for downlink channel in a communication network, using parameters (SFmin, PtxDSCHallowed) for minimum allowed Spreading Factor, SF, and/or allowed power level, the parameters being set depending on the traffic load, the total cell load and/or the availability of channelization codes, wherein three kinds of measurements are performed:

1. Average transmitted power of a physical shared downlink channel, PDSCH,

2. Relative activity factor, A, of the PDSCH, and

3. Weighted code blocking rate, B,

and adaptive adjustment of root spreading factor and power is based on these three kinds of measurements.

21. (New) The method of claim 20, wherein a criteria for adjustment of the allowed power level is:

if A is smaller than THA1, and PtxDSCHest is smaller than (PtxPDSCHallowed – X), then decrease the reserved power, preferably by X or a fraction thereof,

A representing an activity factor of the downlink channel, THA1 a threshold parameter, PtxDSCHest the estimated power of the downlink channel,

PtxPDSCHallowed the power allowed for the downlink channel, and X a certain set value.

22. (New) The method of claim 20, wherein a criteria for adjustment of the allowed power level is:

if A is greater than THA2, and PtxDSCHest is greater than (PtxPDSCHallowed – X), then increase the allowed power by X,

A representing an activity factor of the downlink channel, THA2 a threshold parameter, PtxDSCHest the estimated power of the downlink channel, PtxPDSCHallowed the power allowed for the downlink channel, and X a certain set value.

23. (New) The method of claim 20, wherein a criteria for adjustment of the minimum spreading factor, SFmin , is:

if B is greater than THB, and A is greater than THA2, then decrease SFmin (allow higher bit rates),

B representing a weighted code-blocking rate, A an activity factor of the downlink channel, and THB and THA2 threshold values.

24. (New) The method of claim 20, wherein a criteria for adjustment of the minimum spreading factor, SFmin , is:

if $B = 0$ (zero), and Lcode is greater than THcode, then increase SFmin (maximum bit rate is decreased),

B representing a weighted code-blocking rate, Lcode a current load of a code tree, and THcode a threshold parameter.

25. (New) The method of claim 20, wherein a method for channelization code allocation comprises a step of reserving a new root code with a given spreading factor (Spreading Factor), and a subsequent step of deciding where in a code tree this reservation is to be made.

26. (New) The method of claim 25, wherein codes for downlink basically are assigned in the code tree starting from a certain limb of the code tree, and codes are assigned for users primarily in another limb of the code tree.

27. (New) The method of claim 25, wherein a default capacity is allocated to a territory, e.g. DSCH territory to be used by HS-DSCH and DSCH, when the total code tree load allows this, wherein spreading factor SF is only increased if the code tree is highly loaded.

28. (New) The method of claim 20, wherein total cell load is measured by power.

29. (New) A system for adaptive setting or reservation of channelization codes and/or power for downlink channel in a communication network, using parameters ($P_{txDSCHallowed}$, SF_{min}) for minimum allowed Spreading Factor, SF, and/or allowed power level, the parameters being set depending on the traffic load, the total cell load and/or the availability of channelization codes,

wherein the system is adapted to perform three kinds of measurements:

1. Average transmitted power of a physical shared downlink channel, PDSCH,
2. Relative activity factor, A, of the PDSCH, and
3. Weighted code blocking rate, B,

and to base adaptive adjustment of root spreading factor and power on these three kinds of measurements.

30. (New) The system of claim 29, wherein a criteria for adjustment of the allowed power level is:

if A is smaller than $THA1$, and $P_{txDSCHest}$ is smaller than ($P_{txPDSCHallowed} - X$), then decrease the reserved power, preferably by X or a fraction thereof,

A representing an activity factor of the downlink channel, $THA1$ a threshold parameter, $P_{txDSCHest}$ the estimated power of the downlink channel, $P_{txPDSCHallowed}$ the power allowed for the downlink channel, and X a certain set value.

31. (New) The system of claim 29, wherein a criteria for adjustment of the allowed power level is:

if A is greater than THA2, and $P_{txDSCHe_{st}}$ is greater than $(P_{txPDSCH_{allowed}} - X)$, then increase the allowed power by X,

A representing an activity factor of the downlink channel, THA2 a threshold parameter, $P_{txDSCHe_{st}}$ the estimated power of the downlink channel, $P_{txPDSCH_{allowed}}$ the power allowed for the downlink channel, and X a certain set value.

32. (New) The system of claim 29, wherein a criteria for adjustment of the minimum spreading factor, SF_{min}, is:

if B is greater than THB, and A is greater than THA2, then decrease SF_{min} (allow higher bit rates),

B representing a weighted code-blocking rate, A an activity factor of the downlink channel, and THB and THA2 threshold values.

33. (New) The system of claim 29, wherein a criteria for adjustment of the minimum spreading factor, SF_{min}, is:

if $B = 0$ (zero), and L_{code} is greater than TH_{code} , then increase SF_{min} (maximum bit rate is decreased),

B representing a weighted code-blocking rate, L_{code} a current load of a code tree, and TH_{code} a threshold parameter.

34. (New) The system of claim 29, wherein a method for channelization code allocation comprises a step of reserving a new root code with a given spreading factor SF, and a subsequent step of deciding where in a code tree this reservation is to be made.

35. (New) The system of claim 34, wherein codes for downlink basically are assigned in the code tree starting from a certain limb of the code tree, and codes are assigned for users primarily in another limb of the code tree.

36. (New) The system of claim 34, wherein a default capacity is allocated to a territory, e.g. DSCH territory to be used by HS-DSCH and DSCH, when the total code tree load allows this, wherein spreading factor SF is only increased if the code tree is highly loaded.

37. (New) The system of claim 29, being adapted to measure the total cell load by measuring power.

38. (New) A network entity for adaptive setting or reservation of channelization codes and/or power for downlink channel in a communication network, in particular for downlink shared channel, DSCH, and high speed downlink shared channel, HS-DSCH, using parameters ($P_{txDSCHallowed}$, SF_{min}) for minimum allowed Spreading Factor, SF, and/or allowed power level, the parameters being set depending on the traffic load, the total cell load and/or the availability of channelization codes,

wherein the entity is adapted to perform three kinds of measurements:

1. Average transmitted power of a physical shared downlink channel, PDSCH,
2. Relative activity factor, A, of the PDSCH, and
3. Weighted code blocking rate, B,

and to base adaptive adjustment of root spreading factor and power on these three kinds of measurements.